Together We Power The World

Report # 104632 Sample # 1 **Hunlock Creek Energy Center** Received 06/07/2011 Date June 16, 2011

Serial Number: G244202	Equipment Number: GSU T6	Container Id: LAB ASSIGNED # 5133		Phase: 3	
Substation Name: New 69KV Sub	Preservation System: Gas Blanketed	Miscellaneous Id:		Ambient Temp °C: 25	
Design Type: Shell Type	Transformer Name: T6	Second Name: Hunlock Creek		Humidity: 50	
Manufacturer: GEP	Transformer Type: Transformer	Sample Point: Main Tank Bottom		Top Oil Temp °C: 34	
MFR. Year: 2010	Maximum kV: 66	Sequence #:		Peak Temp °C:	
Cooling System: ONAF	Maximum MVA: 65	Sample Date/By: 6/3/2011 10:00		Fluid Level:	
Fluid Type: Mineral	XFMR Oil Capacity: 4087 Gallons	Appr Type: XFMR		Pressure PSI:	
LTC MFR./Model:	LTC Type:	LTC Tank Type :	LTC Capacity:	Filter LTC:	

Dissolved Gas Analysis The dissolved gas analysis is run in accordance with ASTM D 3612 and IEC 60567. Values are reported in ppm vol/vol at STP and calibrated with gas-in-oil standards. Values before August 15, 2002 are reported at NTP and calibrated with gas standards.

Report #	Sample Date	Top Oil Temp °C	Hydrogen (H2)	Oxygen (O2)	Nitrogen (N2)	Methane (CH4)	Carbon Monox. (CO)	Ethane (C2H6)	Carbon Dioxide (CO2)	Ethylene (C2H4)	Acetylene (C2H2)	Total Gas	COMB GAS	EST TCG %	C2H4/ C2H2	Comb Gas Rate ppm/day
104632	06/03/2011	34	2.6	18400	70800	0	67	0	195	0	0	89465	70	0.07	0.00	

There is a low volume of combustible gas present. The condition is of no immediate concern. It is recommended to resample in 1 year for units 69kV and below.

Oil Quality Tests

Report #	Sample Date	Top Oil Temp °C	Water Content ppm D1533 IEC 60814	Relative Saturation %	Color D1500	D1816-1mm kV D1816	Interfacial Tension mN/m D971 ISO 6295	Neut. No. mgKOH/g D974	PF25C % D924	PF 100C % D924	Specific Gravity 60/60 D1298	Visual D1524
104632	06/03/2011	34	7	7	L 0.5	34	50	< 0.01	0.004	0.242	0.886	Clear & Bright

The water content as reported in relative saturation is good for in-service fluid. The results indicate that the dielectric liquid is acceptable for continued in-service use.